

Release Status

Supported CAD Systems, Kernels

Kernels: ACIS R20, Parasolid 22, CATIA V5 R19.0, Unigraphics NX6, Pro/E Wildfire 4, SolidWorks 2009, Inventor 2009

Supported Platforms and Operating Systems

Windows 2000 & XP SP3 & Vista (32 and 64 bit)
Sun Solaris 8
HP HP-UX 11i
Linux RHEL 5 (32 and 64 bit)

Unsupported Platforms

CADfix no longer supports SGI IRIX and IBM AIX

Import/Export

General

Save As on the file menu includes the CAG and GDX formats.

Merge on file menu gives the ability to import and merge CAD models and CADfix databases into an open (live) session

ACIS R20

Export Body checker has been extended to allow the adjustment of the checking levels
ACIS binary file import (SAB)

CADDS V5

CADDS 5 R14 and import on Windows

CATIA V5 export

New option to export free faces as independent (preserves attributes in V5)

Centaur/Flite3D

Improvements have been made to the fitted splines

DXF import

Improved import of mesh entities

IDEAS

New flavoured Parasolid export for IDEAS

IGES

Improved accuracy of p-curves for export.

Labels can be imported. The "Entity Label" field (max. 8 characters) or from an assigned 406 label attribute

Mesh

New automatic quad mesher

Parasolid V22

Improved auto-labelling of assembly nodes at export

Pro/Engineer

Option for improved import of closed NURBS surfaces and new option to control accuracy of imported vertices

SC03

Export data now contains tessellation data and units
Import 2D, face-planes and pointy-faces find
Permit the transfer of publication tags from CATIA V5

STEP

Now supports curve bounded surface

STL

Improved import of poor quality STL files for fewer import failures
Single faceted surface import - improved handling and repair

Assemblies

Exploding an assembly auto-creates labelled sets from the components
Free faces are imported by default for assemblies
New tool for finding and merging duplicate components in an assembly
Entity limit on exploding of v. large assemblies removed
Improved assembly tree editing includes access to transformation matrices
New exploded component view mode
Improved Wizard results handling

User Interface

Monitor window has a clear option
New tab layout including Advanced STL Manager and Zone Manager
F5: used for repaint
F7: used for centre of rotation
Picking has been made quicker by making the entity count icons in the status bar (bottom right of main window) control the pick type. The current pick type is highlighted in yellow and can be changed by clicking on one of the other entity icons.

- Only available in basic selection mode. At all other times the entity icons do nothing.

Basic selection cancel mode with Esc key
Basic selection clear selection with Ctrl-X key combination

Wizard Process

CWC: control for colour inheritance
Significant improvements to Prepare process giving higher success rates
Speed up the finding of voids in large models
Can now probe entities directly from the Wizard monitor
Transform: gives extended batch processing capabilities

- joining of edges, faces bodies and seams
- collapse of sharp edge angles pinching
- imprint of edges and bodies
- include Fillet removal
- removal of holes from faces

New 'pointy-face' test for checking sharp corner angles has been added to the Prepare stage. This is the angle between the two vectors connecting each surface corner and the point on each neighbouring edge 5% of its parameter space away.
New 'Face-plane' test for combinations of degenerate lines and extreme angles.

Diagnostics/Interactive Repair

New tool for finding and merging duplicate bodies

New fragmented shell Find and Fix tool

- Ideal to overcoming CATIA V4 to V5 conversion problems caused by excessive face splitting with Dassault's migration tools

New fix for non-manifold solids

Improved sharp angle test

Improved NURBS splitting of badly projected spheres

Improved closed NURBS splitting

Grossly undersize surface check improved

New diagnostic for finding non-manifold solids

New continuity test fix for loops with sharp edge angles

Defeaturing/Simplification

Faster face joining algorithm now approximately 10 times faster and better quality joined surfaces

Delete Feature and Delete Fillet tools have; improved robustness, handle more complex cases and will now remove as much as possible before stopping

New Imprint tool for circumstances where multiple bodies are adjacent and when faces are coincident. Merging together can only be achieved if the faces to be merged have like topology and geometry. While various parts will typically have faces, which coincide geometrically, an imprint is necessary to make or force faces to have like topology.

- The Imprint tools will permit you to preview edges and faces; that can or should be imprinted or that overlap or are coincident.
- The user can control the relative degree of coincidence by use of a tolerance.

New Join Bodies tool joins touching bodies into a single body. For instance an exploded assembly can be turned into a single solid

The Body splitter tool has been enhanced with more methods of defining a splitting plane and allowing partial or restricted splits

Geometry Build option will project a point onto a surface and create a line from a point to a surface through the closest projected trajectory i.e. perpendicular to the surface

The geometry building tool permits moving or copying onto a surface

New Transform option for auto-removing sliver faces

- New automatic sliver finding (sliver attached along side of large faces)

New fix for sharp face corners/angles

New "perpendicular" feature deletion option

Improved feature/fillet deletion - more success on complex cases

New split-face-by-shelling tool

NURBS surfaces simplification has been improved to allow conversion to higher order NURBS

- non-rational conversion for torii
- degree 3 non-rational conversions are more accurate

Improvements to face splitting along iso-lines

New split line with a point option

Fragmented surface find and parent face joining tool

Improvements to build tool for faces, edges, move and copy

Move/copy through projecting onto a surface

New Split edges into segments tool

New line intersection tool using two surfaces

New hole capping function

- extension to hole finder to manually cap complex holes

General

Long names restriction of 4 characters removed (12 character limits) giving much larger maximum model sizes

Faster shaded image manipulation and speed-up of dynamic clipping plane performance

Auto-reduction of database buffer when low system memory

Improved screen pick for "centre of rotation" allows the centre to be positioned anywhere on an edge

The Measure tool has two new additions: true line length (as opposed to distance between end-points) and the radius of curvature

Extended support for models with v. large scale differences, e.g. ratio of shortest to longest edge up to 1E9 (now 1E6).

Improved and faster database access

Model tree >> Model status "reset" option for models that have been re-centred

Support for multi-core machines

Analytic surfaces maybe shaded

STL/Mesh Generation

New Advanced STL Manager tool:

- STL facet generator
- New shrink-wrap STL mesh generator
- New STL facet quality checker and fixes
- Facet decimator

New Zone Manager tool:

- Create and manages a "zone" or combined groups of face
- Enables meshing or STL faceting over groups of faces
- Auto-build tool for identifying good zones
- Improved face joining and STL export